

Appl. No. 10/711,390
Amdt. dated April 04, 2006
Reply to Office action of January 12, 2006

Amendments to the Claims:

This listing of claims will replace all prior versions and listing of claims in the application:

Listing of Claims:

- 5 1. (Original) A resistor structure comprising:
a substrate;
a semiconductor layer positioned on the substrate;
a salicide block positioned on portions of the surface of the semiconductor layer; and
10 at least a salicide layer positioned on the portions of the surface of the semiconductor
layer adjacent to the salicide block;
wherein the semiconductor layer comprises a predetermined region overlapping the
salicide layer, the junction between the salicide layer and the salicide block, and the
portions of the salicide block adjacent to the junction between the salicide layer and the
15 salicide block, and the semiconductor layer has a higher doping concentration within the
predetermined region than in the other regions.
2. (Original) The resistor structure of claim 1 wherein the predetermined region is located
at either end of the semiconductor layer.
- 20 3. (Currently amended) The resistor structure of claim 1 further comprising:
an ~~inter-layer~~ inter-layer dielectric positioned on the substrate, the ~~inter-layer~~ inter-layer
dielectric comprising at least a contact hole connecting to the salicide layer; and
at least a conductive layer positioned on portions of the surface of the inter layer
25 dielectric and within the contact hole.
4. (Original) The resistor structure of claim 1 further comprising an ion implantation well
positioned underneath the semiconductor layer.

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5. (Original) The resistor structure of claim 1 wherein the semiconductor layer comprises a polysilicon layer.

5 6. (Original) The resistor structure of claim 5 further comprising a dielectric layer positioned underneath the semiconductor layer.

7. (Currently amended) A resistor structure comprising:
a substrate; [[and]]

10 a semiconductor layer positioned on the substrate, the semiconductor layer comprising at least a high resistance region and a low resistance region;

a salicide block positioned on the portions of the semiconductor layer within the high resistance region; and

15 a salicide layer positioned on the portions of the semiconductor layer within the low resistance region;

wherein the semiconductor layer comprises a predetermined region overlapping the low resistance region, the junction between the low resistance region and the high resistance region, and the portions of the high resistance region adjacent to the junction between the low resistance region and the high resistance region, and the semiconductor layer has a
20 higher doping concentration within the predetermined region than in the other regions region of the semiconductor layer, and the predetermined region also overlapping the salicide layer, the junction between the salicide layer and the salicide block, and the portions of the salicide block adjacent to the junction between the salicide layer and the salicide block.

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8-10. (Canceled).

11. (Original) The resistor structure of claim 7 wherein the predetermined region is

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located at either end of the semiconductor layer.

12. (Currently amended) The resistor structure of claim 7 further comprising:
an ~~inter-layer~~ inter-layer dielectric positioned on the substrate, the ~~inter-layer~~ inter-layer
5 dielectric comprising at least a contact hole connecting to the portions of the
semiconductor layer within the low resistance region; and
at least a conductive layer positioned on portions of the surface of the inter layer
dielectric and within the contact hole.
- 10 13. (Original) The resistor structure of claim 7 further comprising an ion implantation
well positioned underneath the semiconductor layer.
14. (Original) The resistor structure of claim 7 wherein the semiconductor layer
comprises a polysilicon layer.
- 15 15. (Original) The resistor structure of claim 14 further comprising a dielectric layer
positioned underneath the semiconductor layer.

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